

REMARKS

The Applicants thank the Examiner for the thorough consideration given the present application. The specification has been amended to improve the format.

Status of the Claims

Claims 1-18 are pending in the application. The claims have been amended to improve their language and format. Support for claims 10-12 can be found at page 8, lines 22-25 of the specification. Claims 13-18 correspond to claims 1-6.

Rejection Under 35 U.S.C. §102(b) Over Saka

Claims 1-4 and 6-8 are rejected under 35 U.S.C. § 102(b) as being anticipated by Saka (EP 0 747 183 A2). Applicants traverse.

The present invention pertains to a method of treating wood that includes applying two materials: a hydrophobizing agent and a complexing agent. The invention is typically embodied by claim 1, which sets forth:

1. (Currently Amended) A method for protecting wood and similar lignocellulose-based materials against decay and molding, comprising:
treating with a hydrophobification compound selected from the group consisting of siloxane derivatives and fluoroalkyl polymers, which improves its water-repellence, and
treating with a complexing agent capable of binding transition metals.

An additional embodiment of the invention can also be found in claim 13, where the hydrophobification compound comprises siloxane and a derivative.

Saka pertains to a method of modifying wood by impregnating the wood with a methylsiloxane oligomer, followed by curing. Saka fails to disclose or suggest treating with a complexing agent capable of binding with transition metals.

Saka, as a result, fails to anticipate the invention as embodied in independent claims 1 and 7. Claims dependent upon claim 1 are patentable for at least the above reasons.

This rejection is accordingly overcome and withdrawal thereof is respectfully requested.

Rejection Under 35 U.S.C. §102(b) Over Kymmene

Claims 1-9 are rejected under 35 U.S.C. §102(b) as being anticipated by Kymmene (EP 0 682 091 A2). Applicants traverse.

Kymmene pertains to a surface treatment composition that contains a solvent, a binder and a substance that prevents the growth and spreading of microorganisms. The substance that prevents the growth and spreading of microorganisms is formed by a complexing agent capable of binding transition metals. See Abstract of Kymmene.

Kymmene fails to disclose or suggest "a hydrophobification compound selected from the group consisting of siloxane derivatives and fluoroalkyl polymers, which improves its water-repellence," such is typically embodied by claim 1 of the invention. Independent claims 7 and 9 contain similar limitations.

At page 2, lines 11-13, the Examiner alleges: "Kymmene et al., teach the preservation of wood and lignocellulose materials by treatment with a complexed siloxane resin wherein a water-resistance is achieved and the complexing agent minimizes leaching from wood." However, Applicants can find no teaching in Kymmene that can support the aforesaid allegation. That is, nowhere in Kymmene can be found a teaching or suggestion of either a siloxane or fluoroalkyl hydrophobizing agent. Accordingly, the Examiner is respectfully requested to

explicitly point out where in Kymmene these teachings are to be found.

As a result, Kymmene fails to anticipate the invention as set forth in independent claims 1, 7 or 9. Claims dependent upon these independent claims are patentable for at least the above reasons.

This rejection is accordingly overcome and withdrawal thereof is respectfully requested.

Rejection Under 35 U.S.C. §103(a) Over Bugg and Silenius

Claims 1-9 are rejected under 35 U.S.C. §103(a) as being obvious over Bugg (U.S. Patent 4,044,172) in view of Silenius (WO 94/22647). Applicants traverse.

Bugg pertains to a wood treating process for the coloring and staining of wood. Bugg at column 2, lines 43-52 discusses a silicone fluid that can be dimethyl siloxane or phenylmethyl polysiloxane. Bugg fails to disclose or suggest complexing agents.

The method of Bugg is to superficially treat the wood to color it. Bugg at column 3, lines 34-36 states: "Thus, the coloring process does not appear to affect, in any significant way, the primary structural constituents of the wood." The

invention, in contrast, does alter the primary structural constituents of the wood, as is shown by the results for contact angle (Fig. 1), dry volume difference (Fig. 2), ASE (Fig. 3) and weight loss (Fig. 4). A person having ordinary skill, if trying to achieve these fundamental changes, would be taught away from the invention by the teachings of Bugg.

Silenius pertains to a method for preserving wood against microorganisms by treating the wood with complexing agents. The Abstract of Silenius states "According to the method, the wood being preserved is treated with a substance capable of inhibiting the growth of microorganisms, whereby said substance is penetrated into the wood at least essentially deeper than superficially."

As a result, a person having ordinary skill in the art would have no motivation to combine the coloring method of Bugg with the deep wood treatment of Silenius to produce and embodiment of the invention such as is set forth in independent claims 1, 7 and 9. A *prima facie* case of obviousness has thus not been made over Bugg and Silenius. Claims dependent upon the independent claims are patentable for at least the above reasons.

Unexpected Results

Further, even if it assumed *arguendo* that Bugg and Silenius are sufficient to allege obviousness, this obviousness is rebutted by unexpected results.

These unexpected results are set forth in Figures 1-7 of the application. The siloxane derivative of Compound 1 can be compared to the technology of Bugg. The inventive technology is represented by the siloxane-chelator mixture of Compound 2. Dramatic improvements for the inventive Compound 2 can be observed, for example, for dry volume difference (Fig. 2), ASE (Fig. 3), weight loss (Fig. 4) and mold index (Fig. 6).

The examples of the application show the synergistic effect of the combination of complexing agents and siloxane derivatives protecting wood against decay. This synergistic effect came as a surprise to the inventors and is discussed in the specification in Examples 1-6.

The advantages of the invention are thus clear.

As a result, the invention cannot be rendered *prima facie* obvious by Bugg and Silenius. Moreover, the invention shows unexpected results over the disclosures of Bugg and Silenius.

This rejection is accordingly overcome and withdrawal thereof is respectfully requested.

Claim for Priority

It is gratefully acknowledged that the Examiner has recognized the Applicant's claim for foreign priority. In view of the fact that the Applicant's claim for foreign priority has been perfected, no additional action is required from the Applicant at this time.

Drawings

The Applicant has not received a Notice of Draftsperson's Patent Drawing Review Form PTO-948, indicating whether the formal drawings have been approved by the Official Draftsperson. Clarification in the next official communication is respectfully requested.

Acknowledgement of Information Disclosure Statement

The Examiner has acknowledged the Information Disclosure Statement filed on July 25, 2002. An initialed copy of the Form PTO-1449 has been returned by the Examiner. No further action is necessary at this time.

CONCLUSION

Since the remaining patents cited by the Examiner have not been utilized to reject claims, but merely to show the state of the art, no comment need be made with respect thereto.

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. It is believed that a full and complete response has been made to the outstanding Office Action, and that the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, he is invited to telephone Robert E. Goozner (Reg. No. 42,593) at (703) 205-8000.

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If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17, particularly extension of time fees.

Respectfully submitted,

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Attachment 45
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